

CLAIMS

What is claimed is:

- 1 1. A data exchange engine for use with a database, comprising:
2 a virtual record manager coupled to the database and configured to
3 manage the storage of at least one data record in the database, the data record
4 being managed at an individual data field level; and
5 a data exchange engine coupled to the database and configured to
6 support an exchange of the information in at least one data field between at
7 least two parties, the exchange being based on a relationship between the
8 parties, the relationship being represented in the database.
- 1 2. The engine of claim 1 wherein the virtual record manager is configured to
2 support a complex data record, the complex data record comprising a plurality
3 of related data fields.
- 1 3. The engine of claim 2 wherein the data exchange engine is configured to
2 support the exchange of the information in the complex data record.
- 1 4. The engine of claim 1 wherein the virtual record manager is configured to
2 allow a unique type of data record to be created substantially instantaneous.
- 1 5. The engine of claim 1 wherein the virtual record manager is configured to
2 allow an instance of the data record to be allocated to the database substantially
3 instantaneous.
- 1 6. The engine of claim 1 wherein the virtual record manager is configured to
2 assign each data field a unique identifier.

1 7. The engine of claim 1 wherein the virtual record manager is configured to
2 associate each data field with a data record type and to manage each data field
3 according to the data record type.

1 8. The engine of claim 1 wherein the virtual record manager is configured to
2 utilize a virtual object to manage the storage of the data record, the virtual
3 object defining a data record structure being a logical grouping of individual
4 data fields, the virtual object being described as a virtual object type whereby
5 the virtual object type is configured to provide a description of the data record
6 structure;
7 wherein utilization of the virtual object allows a unique type of data record to
8 be created substantially instantaneous.

1 9. The engine of claim 8 wherein utilization of the virtual object allows an
2 instance of the data record to be allocated to the database substantially
3 instantaneous.

1 10. The engine of claim 1 wherein the virtual record manager and the data
2 exchange engine are configured to provide a means for a party to exchange
3 specific data fields with all other parties with which the party has a
4 relationship.

1 11. The engine of claim 1 wherein the virtual record manager is configured to
2 define a mapping between a third party data record format and a native data
3 record format.

1 12. The engine of claim 11 wherein the mapping utilizes extensible markup
2 language.

1 13. The engine of claim 1, further comprising:
2 an encryption engine coupled to the database and configured to manage
3 the encryption of the data record prior to storage in the database.

1 14. The engine of claim 13 wherein the encryption engine is configured to
2 support a different encryption method for individual data fields of the data
3 record.

1 15. A personal information exchange system comprising:
2 an interface layer configured to provide at least one interface application
3 configured to facilitate communication with a user through a network;
4 an application layer coupled to the interface layer and configured to
5 provide a means to store the personal information of the user in a data
6 repository;
7 an exchange engine layer coupled to the application layer and
8 configured to provide a means to manage storage of the personal information in
9 a manner such that a type of personal information is instantiated substantially
10 instantaneous; and
11 the data repository coupled to the exchange engine and configured to
12 provide storage of information describing parties allowed access to at least a
13 portion of the personal information.

1 16. The system of claim 15 wherein the data repository is configured to provide
2 storage of information describing the means to manage storage of the personal
3 information.

1 17. The system of claim 15 wherein the portion of personal information
2 represents a data field in a data management system.

1 18. The system of claim 15 wherein the network is a wireless network.

1 19. A method for providing dynamic contact information of a user of a
2 dynamic information exchange system, comprising the steps of:
3 invoking a record manager to obtain information identifying a party to
4 which the user has permitted dynamic exchange of information;
5 invoking a data exchange means to obtain information identifying a data
6 field of a data record to which the identified party has allowed exchange with
7 the user;
8 invoking the record manager to read from a memory a content of the
9 identified data field; and
10 providing the content to an interface for transmission to the user.

1 20. A method for utilizing a virtual record manager to manage a virtual object
2 defining a data record structure in an information storage system supporting
3 real-time instantiation of data records, comprising the steps of:
4 associating a type to the virtual object, the type being related to a
5 description of data record content;
6 creating a row in a first data table to store data related to the type;
7 providing type metadata associated with the type to the virtual record
8 manager, the type metadata describing the quantity of data fields constituent to
9 the data record;
10 creating a second data table, each row in the second data table
11 representing one of the data fields constituent to the data record; and
12 providing field metadata associated with at least one data field to the
13 virtual record manager, the field metadata describing the data record content;
14 whereby the virtual record manager provides real-time instantiation of
15 the data record.

22. The machine-readable medium of claim 21, the method steps further comprising:

- associating an object type with the information;
- creating a row in a first data table to store object type metadata related to the object type, the object type metadata describing the quantity of data fields constituent to the information record;
- creating a second data table, each row in the second data table representing at least one of the data fields constituent to the information record;
- and
- providing field metadata associated with the at least one data field to a virtual record manager, the field metadata describing the information in the at least one data field; and
- providing real-time instantiation of the information record in the data repository based on the first and second data tables and the object type and field metadata.

